



## THE EFFECT OF BALLOON ROCKET PLAY THERAPY ON ANXIETY IN PRESCHOOL CHILDREN DURING HOSPITALIZATION

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### ABSTRACT

Preschool children aged 3-6 years are affected by exposure to a new environment when treated at home. Being sick will result in emergence, feeling anxious and afraid. One of the efforts to reduce worry is through play therapy using balloon rockets. Objective: This study was conducted using the T test which showed the effect of Rocket Balloon Play Therapy on Anxiety in Preschool Children Due to Hospitalization. The P value is  $<0.001$  which means it is less than 0.05 ( $0.001 < 0.05$ ). Method: This study is a quasi-experimental study with a one group pretest-posttest design and uses a purposive sampling technique with a sample size of 20 children. Result: This study was conducted using the T test which showed the effect of Balloon Rocket Play Therapy on Anxiety in Preschool Children Due to Hospitalization. The P value is  $<0.001$ , which means it is less than 0.05 ( $0.001 < 0.05$ ). Conclusions: There is an effect of balloon rocket play therapy on preschool children's anxiety during hospitalization in the children's ward of UNS Sukoharjo Hospital.

Keywords: anxiety; balloon rockets play therapy; pre-school

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## INTRODUCTION

Hospitalization is a condition where a person requires home care to overcome or alleviate their illness (Sriyanah et al., 2021). Hospitalization in children can cause stressors of loss of control, fear of physical pain, and anxiety and stress due to pain that has never been experienced before (Setiawati & Sundari, 2019). Children who are exposed to a new environment while being hospitalized will develop a fear of strangers (Fatmawati et al., 2019). Children may also dislike the hospital environment because of the crowd, noise, crying of other children, heat, and lack of play facilities. Hospital food sometimes tastes bland and tasteless (Aliyah & Rusmariana, 2021). Based on data from the World Health Organization (WHO) 2021 in (Triani et al., 2023), hospitalization in preschool children is 45%, while in Germany around 3% to 7% of toddlers and 5% to 10% of preschool children are hospitalized. According to data from the United Nations International Children's Fund (UNICEF) in 2015, the main problem of sick children is a complex problem that occurs in Indonesia, where the incidence rate is 27 per 1,000 live births and around 75% of children who die from this disease are said to feel anxious when hospitalized. According to the results of the National Economic Survey (SUSENAS), preschool children (3-5 years) cover 30.82% of the total population of Indonesia, and around 35 out of 100 children have experienced preschool age (Ekasaputri & Arniyanti, 2022)

According to global data in 2020, the number of hospitalizations of children in Indonesia has increased from year to year. The average prevalence of children hospitalized in 2018 was around 3.49%, increasing to 3.84% in 2019, and reaching 3.94% in 2020. Meanwhile, in

Central Java, the prevalence of children hospitalized reached 5.39 last year. Judging from the characteristics of the proportion of children hospitalized in the past year, data for the 0-4 year age group was 7.36%, data for the 5-9 year age group was 3.14%, data for the 10-14 year age group was 2.07%, and data for the 15-4 year age group was 7.36%, 2.27% for the 17 year age group (Central Java Health Office, 2020). If the child's anxiety is not addressed immediately, the impact experienced by the child due to care can result in the child refusing further treatment (Della & Risdiana, 2023). To reduce the fear of being hospitalized, efforts are needed to reduce the child's fear so that the child can cooperate with the treatment given, including play therapy (Yuliyanto et al., 2023).

Distraction techniques that can be used in hospitals to reduce anxiety include visual, intellectual, auditory, and respiratory distractions (Ona & Nelistia, 2024). The concept of distraction, both active and passive distractions, is an important part of play therapy (Dewi et al., 2023). Play therapy is one way to divert children's attention through media that is interesting and enjoyable for them (Pratiwi, 2021). This can divert the patient's attention from pain, fear, anxiety, and stress caused by medical procedures and the hospital environment during hospitalization (Bawaeda et al., 2023). The type of game that is suitable for preschool children during hospitalization which can also improve fine and gross motor coordination skills and control breathing with play activities is Balloon Rockets play therapy. This type of game is in line with research (Sari & Arifah, 2017) which uses super bubble play therapy to reduce anxiety levels in preschool children who are hospitalized. This study aims to determine the effect of balloon rocket play therapy on anxiety in preschool children during hospitalization in the children's ward of UNS Sukoharjo Hospital.

## METHOD

The type of this research method is quasi-experimental with a one group pretest-posttest design. This research was conducted in October-November 2023 in the children's ward of UNS Sukoharjo Hospital. The number of research subjects used was 20 subjects with a purposive sampling technique and using the t-test. The criteria in this research sample include: 1) inclusion criteria (pre-school children (3-6 years), the second day of treatment, the level of consciousness of the child's compos mentis fussy during hospitalization, parents willing to be research partners 2) exclusion criteria (pre-school children 3-6 years old) weak condition, unwilling to be respondents. This research has received permission from the FIK ethics committee No. 00075 / EA / 2024 / 0136223311. Anxiety was measured using an anxiety questionnaire instrument from the Zung self-rating anxiety scale developed by W.K Zung in 1971 consisting of 16 questions with each question given a value of 0 = never at all, and 1 = yes. Validity testing has been carried out by (Purwati, 2017) and the test results were obtained from 20 invalid questions numbered 3,5,12,13. Reliability testing was also not carried out in this study because the results of the Cronbach alpha value were 0.890 so that the alpha value was reliable. This Balloon Rocket Game is effective if played for 30 minutes in one day and played by children who are being treated in hospital and accompanied by nurses or parents. Data were analyzed quantitatively.

## RESULTS

Table 1, it can be seen that the majority (55%) are female children, (45%) are male children, with the largest age being 4 years old at 40%.

Table 1.  
Respondent characteristics (n= 20)

Respondent characteristics	f	%
Gender		
Male	9	45%
Female	11	55%
Age		
3 years	4	20%
4 years	8	40%
5 years	6	30%
6 Years	2	10%

Table 2.  
Anxiety Levels of Preschool Age Children Before and After Being Given Balloon Rockets Play Therapy.

Level Anxiety	Before		After	
	f	%	f	%
Emergency light	0	0	2	10
Emergency moderate	2	10	12	60
Emergency heavy	14	70	6	30
Panic	4	20	0	0

Based on the table above, it can be concluded that 70% of children experienced severe anxiety before being given balloon rocket play therapy while being treated in hospital, and after being given balloon rocket play therapy, 60% of children fell into the moderate anxiety category.

Table 3.  
The Effect of Balloon Rocket Play Therapy on Children's Anxiety During Hospitalization

	N	Mean	Std. Deviation	Sig. (2-tailed)
Pretest-Post Test	20	3,950	0.999	<0.001

Based on table 3, it can be seen that the level of anxiety in children before and after being given Balloon Rockets play therapy is obtained if the P value is <0.001 with a significance level of 0.05. Therefore, the results of the paired t-test are smaller than 0.05, namely <0.001, it can be concluded that Balloon Rockets therapy has an effect on the level of anxiety in preschool children treated in the children's room of UNS Hospital.

## DISCUSSION

### Respondent Characteristics

In this study, it was found that the majority (55%) of female children were more anxious than male children. This is in line with research (Islamiyah, Asri Dwi Novianti, 2024). which shows that out of more than 28 respondents, the most anxious were girls. Signs of anxiety that appear in children when being treated in hospital are crying, rebelling when given nursing care. According to research (Setiawati & Sundari, 2019) girls who are hospitalized will feel a high level of anxiety compared to boys. Other research in (Faidah & Marchelina, 2022) also supports that gender affects children's anxiety levels because boys tend to be more active and explorative than girls so that girls tend to be more sensitive and tend to use their feelings. In this study, the majority of 4-year-old children (40%) experienced anxiety when being treated in hospital. This is because preschool children are not yet able to accept perceptions about illness or the environment outside the hospital. This study is the same as the study (Aryani & Zaly, 2021) which stated that 4-year-old children mostly (34.3%) participated in play activity therapy. According to research (Nirnasari & Wati, 2020) infants, toddlers and preschoolers

are more likely to experience anxiety because their age and cognitive abilities are limited in understanding hospitalization.

### **The Effect of Balloon Rocket Play Therapy on Anxiety Levels of Preschool Children During Hospitalization**

After being given balloon rocket play therapy, the anxiety level in children who previously experienced severe anxiety as many as 14 children (70%) and panic category as many as 4 children (20%) decreased to moderate category as many as 12 children (60%). This is in line with the study (Rahman et al., 2020) entitled The Effect of Play Therapy on Anxiety Due to Hospitalization in Early Childhood has obtained the results of children's anxiety due to hospitalization before being given play therapy, the anxiety level in early childhood was in the range of severe worry as many as 13 children (43.3%) and panic 12 children (43.3%). Meanwhile, after completing play therapy, the anxiety level in children is currently at anxiety as many as 18 children (60%). The cause of children being in a state of severe anxiety is that children who have just undergone treatment in the hospital with a new environment experienced by early childhood, the atmosphere at home is sometimes frightening so that children become anxious and tense. This is in line with research (Rahmania et al., 2023) which explains that factors that can influence anxiety levels during hospitalization include hospital environmental factors, hospitals can be scary places from a child's perspective (Vianti, 2020). A strange home atmosphere, unfamiliar faces, various types of machine sounds used, and distinctive smells can cause anxiety and fear for both children and parents(Afriliani & Kesuma Dewi, 2023). The atmosphere of the child's room in the hospital should be made as attractive as possible so that children feel more comfortable so that they can minimize anxiety due to hospitalization (Gusrina et al., 2020) .

After being given balloon rocket play therapy, the child's anxiety level began to decrease, this is because the balloon rocket game is carried out using the blowing method, blowing balloons indirectly is one method of teaching deep breathing relaxation techniques to preschool children. This is in line with research (Padila et al., 2020) that breathing relaxation exercises can increase maximum alveolar inflation, increase muscle relaxation, increase alveolar ventilation, maintain gas exchange, eliminate anxiety, and reduce the work of breathing. The study entitled bubble breathing relaxation training for kindergarten teachers also proved that bubble breathing relaxation is a relaxation that uses deep breathing techniques to help children control the anxiety they experience by using bubble soap as a medium (Putrikita & Widanarti, 2023).

## **CONCLUSION**

The level of anxiety before rocket balloon therapy was carried out was at the level of anxiety in preschool children due to hospitalization, namely that most children experienced severe anxiety. After being given rocket balloon therapy to the anxiety level of preschool children due to hospitalization, most of the children experienced moderate anxiety. There is an Effect of Rocket Balloon Therapy on Preschool Children's Anxiety Levels Due to Hospitalization in the Creative Room at UNS Hospital.

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